

PHILADELPHIA MEDICAL TIMES.

SATURDAY, SEPTEMBER 11, 1875.

ORIGINAL COMMUNICATIONS.

ON MEMBRANOUS CROUP AND ITS TREATMENT.

BY BEDFORD BROWN, M.D.,

Alexandria, Va.

SETTING aside all theories in regard to the specific character of croup as unsustained either by arguments or by facts, those pathological processes combining to complete the disease known as membranous croup comprise, primarily, engorgement; secondarily, inflammation; and, lastly, exudation on the mucous membrane of the larynx and trachea; or, rather, the destruction and sloughing or exfoliation of the involved epithelium, and then the membranous exudation. This process of epithelial exfoliation is truly one of the most important of all those elements entering into the formation of the disease. Without this preliminary arrangement it would not be possible for the last and most important stage—that of exudation—to occur.

Hence, when the destruction and exfoliation of the epithelial coat have taken place, the basement membrane underneath is laid bare; it can no longer secrete mucus, but becomes the theatre of those important actions consisting in the exudation of plastic material from the exposed vessels, which rapidly assumes the form and consistency of membranes.

Not in all, but in a very large proportion of the cases of tonsillitis coming under our observation, in greater or less degree these identical processes occur and may be observed at any time.

In such cases the affected tonsil first becomes engorged, then highly inflamed, then one or more white or gray patches, sometimes larger than a shilling, appear on its surface. These may disappear and reappear several times before resolution. These cases are usually denominated ulcerative, and, at other times, diphtheritic. In reality they are neither, but of a true exudative character with an innocent type of disease. If such exudations were situated in the larynx or trachea, they would then become matters of infinite moment. In tonsillitis of this character, until the inflammatory action subsides, we may observe this membranous exudation, though removed by local applications, return every day. Its removal is usually followed by bleeding.

The same destruction and exfoliation of the epithelial coat occur here as in membranous croup. Thus, while the epithelial coat exists in its perfection with unimpaired functions, there can be no membranous formation. This fact is one of paramount importance in the pathological history of croup and its therapeutic management.

Bearing on this point there is another pathological question of infinite importance. It is whether membranous croup is a simple inflammatory affection, or a specific disease. Universal experience in the profession unites in establishing the opinion that by appropriate treatment the exudation may be

prevented. Hence the conclusion that this form of croup is a simple form of inflammation. Under intense inflammation, the epithelium ceases to perform its function of secreting mucus. There is an utter suspension of action, and consequently a complete absence of all moisture on the epithelial surface. There is no relief of the engorgement and blood-stasis, and this delicate coat sloughs, leaving the basement membrane denuded, with its injected vessels laden with plastic blood, when exudation results. In simple tonsillitis with limited exudation we have ocular demonstration of the fact that this exudation, when left undisturbed, continues to grow in proportion to the area of the destruction of the epithelium, and also of the fact that during a high state of inflammatory action the epithelial coat so destroyed cannot be repaired until resolution begins. Hence the successive crops of exudation in membranous croup, diphtheria, and tonsillitis, while inflammation continues.

It would appear that in all local affections of an exudative character, morbid action must reach a certain point, must pass only through certain stages, and must be surrounded with favorable circumstances, to complete the process of exudation. When this process is interrupted, either the normal secretion of the part affected takes its place, or purulent formation is substituted. Thus, in the case of incised wounds, the adhesive or plastic form of inflammation is often through slight influences converted into the purulent. In serous inflammations, also, the adhesive may be exchanged for the purulent or serous products either by local or by general influences. In membranous croup we desire to convert the plastic form of the inflammatory products into the mucous before exudation has taken place, and, if possible, into the purulent after that has occurred. Thus, if the epithelial cells coating the inflamed surface should be made to pour out their peculiar secretion there can be no plastic exudation, and these delicate bodies are saved from destruction.

Treatment of the Inflammatory Stage.—Whatever agents will cause a free secretion of mucus in this stage of croup, will prove the best means of preventing the last or exudative stage.

Iodide of potassium is unquestionably one of the most prompt and certain stimulants of the mucous secretion in our possession. With this valuable property it combines an alterative power over inflammations of mucous membranes, which gives it peculiar adaptation to the treatment of the inflammatory stages of this affection. The object in using it is to cause the mucous membrane of the bronchial system to pour out its secretions copiously, with a view of saving the epithelial coat from being destroyed, and preventing exudation. So long as the fever and inflammation are active, the cough clear and metallic in character, the voice hoarse, the iodide may be used energetically and freely. This remedy, to be of service in this disease, must be used in heroic doses, repeated at intervals of one or two hours. Time is a precious consideration in the treatment of croup, and to insure success the system

must be saturated with the drug as speedily as possible. The remarkable sedative influence exerted by this preparation over inflammations of the respiratory tract gives it additional value in the treatment of croup. Its sedative power in the turbulent and labored respiration of asthma and emphysema, in dry catarrh, and in kindred affections, is unequalled by that of any other drug for permanent effect. In addition to this, it is especially adapted to the respiratory diseases of childhood. The action of iodide of potassium over the respiratory tract begins with the Schneiderian membrane, and embraces the mucous surface of the mouth, the entire glandular system pertaining to salivation, the pharynx, larynx, trachea, and bronchial membrane. The normal secretions peculiar to all these surfaces are greatly augmented by its agency. Indeed, its remarkable powers as an expectorant are far from being understood or appreciated.

In the inflammatory stages of croup it may be advantageously combined with the bicarbonate and bromide of potassium, and glycerin, which latter has valuable expectorant properties.

The following formula is adapted to a child of five years of age:

R Potass. iodid., ℥ss;
Potass. bicarb., ℥ij;
Potass. bromid., ℥i;
Aqua, ℥ij;
Glycerinæ, ℥i.—M.

Sig.—Dessertspoonful every hour.

Under the free and energetic use of the iodide in these affections, either alone or in the above combination, when the system is fully saturated with the drug the quantity of salivary and mucous secretion poured forth is sometimes astounding. This is true of croupal, tonsillitic, and catarrhal affections. In cases of tonsillitis with intense injection and tension of mucous surface, and attended with great dryness and want of moisture, the iodide will usually stimulate free secretion from the fauces, to the infinite relief of the local affection.

In a considerable proportion of the cases treated by the iodide of potassium in large doses, there was free and copious salivation, but without any of the peculiar inflammation of the salivary glands resulting from the use of mercury.

The following cases are presented as examples of the treatment of croup by this method.

Case I.—A boy of six years had been very hoarse with fever and croupy cough for several days. When visited, he was suffering from intense hoarseness, genuine metallic cough, labored breathing, and restlessness. The tonsils were inflamed, and presented exudation on their surfaces. This patient took four grains of iodide and five grains of bicarbonate of potassium, dissolved in one teaspoonful of glycerin and a tablespoonful of water every two hours. In twelve or fifteen hours the symptoms were all diminished in violence. In twenty-four hours there were copious salivation and free secretion of mucus from the bronchial surface. The exudation on the tonsils soon disappeared, and the patient, after expectorating small portions of membrane, made a rapid recovery.

Case II.—This was a young and very robust boy of three years. After a preliminary hoarse cough, with feverishness for two or three days, the formal attack of croup set in with very alarming symptoms. The same prescription was resorted to in this as in the former case, only in diminished proportion, with similar results.

Treatment of the Exudative Stage.—After exudation has been fully established a different system of treatment becomes necessary.

The tincture of the chloride of iron, combined with the chloride of ammonium and chlorate of potassium, are the only general reliable means in this stage. They act best when dissolved in glycerin and water. Glycerin is always a valuable agent in croup, as it is one of the few articles which invite moisture to the inflamed surface in the form of sero-mucous secretion.

Thus, when the symptoms of orthopnea become more permanent, and the fever declines without corresponding improvement, this treatment should be instituted vigorously and without delay. The system must be saturated with the remedies as rapidly as possible; consequently they should be given every hour.

The following case is reported as an example of the effects of this treatment.

Case III.—This was a healthy child of fifteen months. When first visited, it had been suffering with a dangerous attack of croup for two days. There was fever, with great acceleration of pulse, entire suppression of cough and voice, with inability to cry. The respiration was painfully labored, with frequent paroxysms of difficult respiration. After a vain trial of the potash treatment, the following prescription was administered every hour:

R Tinct. ferri chlor., ℥i;
Ammonii chloridi, ℥iss;
Potass. chlorat., ℥ij;
Glycerin., ℥ss;
Aqua, ℥iss.—M.

Dose, one teaspoonful.

In connection with stimulants and nourishment, this treatment was continued with favorable results.

The chloride of iron is not given here, as in diphtheria and its kindred diseases, as a corrective of blood-poisoning, but for its remarkable influence over local disease of a diffuse inflammatory character attended with either exudation, effusion, or extravasation. When absorbed into the circulation in sufficient quantity, it exerts a marked influence on the capillary vessels in the remotest part of the system, contracting their calibre, reducing dilatation, correcting engorgement, and arresting exudation.

THE USE OF BATHS IN THE SUMMER-COMPLAINT OF CHILDREN.

BY J. G. THOMAS, M.D.,

Savannah, Georgia.

I HAVE just read with interest a communication in the *Medical Times* of July 17, by Dr. C. G. Comegys, on the use of water in the "summer-complaint" of children when it is accompanied

by fever. In the variety of this disease which he so accurately describes as entero-colitis we perhaps always have more or less fever.

I desire simply to add my humble testimony to what Dr. C. says so far as the treatment by water is concerned; and of course the use of water as here proposed is only auxiliary to other means.

This disease has been almost epidemic with us this summer, and accompanied with more persistent and obstinate fever than I have ever before known it.

The treatment alone by internal means has been very unsatisfactory; in fact, with me it has always been so in a certain percentage of the cases, for the reason that it is oftentimes impossible to get medicines to remain on the stomach.

In the cases coming under my observation the temperature ranged from 101° to 105° ; and it was those of a very high degree of fever that caused me to get in the habit of using what I call the *reduction* treatment by cold water; and I now employ it in all cases of any fever, varying the temperature by the temperature of the patient. Usually by placing a little patient with fever of 102° to 103° or 104° , in water of temperature 70° to 85° for twenty or thirty minutes, the heat will run down to the normal point or below it, and the child will go quietly to sleep, and wake up in an hour or two, much improved. In families where I have used this for the first time, like Dr. C., I have found it prudent to stay for an hour or two and see the treatment properly carried out, for many nurses and mothers will at first be afraid of it, but they will soon get over all this fear when they observe the charming effect it has upon the child. The plan I have pursued is a little different from that described by Dr. C., and I will briefly explain it, for I am persuaded that it is not so much employed as it should be, although it is so simple and so easily practised by any one.

I first take the temperature of the child before it goes in the bath, and then the temperature of the bath, and, as a rule, have the child put into the water at the supposed temperature at which it is in the habit of bathing. But some children are very nervous about going into water: with such as these we should be very deliberate, and should allow them to get accustomed to it. They should be put into water a little above tepid, to which colder water should be gradually added until the temperature is reduced to 75° ; or, when the fever is very hot, and does not yield readily, to 70° . In many cases the child will scream a short time, but if they are properly managed their cries soon cease, and they wake up an hour after they are taken out, much improved; whereas before, they were unable to sleep for the nervous twitchings and threatenings towards convulsions. The child, after it has been in the bath for from twenty minutes to half an hour, should be taken out, the axillary region dried with a soft towel, and its temperature taken. If we find the heat has gone down to the normal degree or a little below, the child should be wrapped in a light woollen blanket and put in its bed, when, as said above, it will almost invariably sleep for some time. But in one hour its temperature should be taken again, and if it has gone up, the same process should

be gone over. Thus I have kept it up in some persistent and severe cases for days, making the child comfortable, and giving time for the effect of other controlling remedies.

In some cases the fever once reduced in this way will not return for four, five, six, or twelve hours, whilst in others it does not return at all; and in all the baths control the heat so as to make the case one of much less gravity, provided they be properly and persistently used.

I have persuaded myself, since the introduction of the clinical thermometer into use, that heat in the blood sometimes causes convulsions, and that there are many cases in scarlatina, for instance, as well as other diseases, which have died from the effect of heat upon the globules of the blood, which we are in the habit of attributing to the effect of poison of the disease. This conclusion of course is founded alone upon clinical observation, without any pathological investigation.

But I only set out to confirm the experience of your contributor, Dr. C., in the use of baths in this very troublesome and fatal complaint of children; and I feel sure that if it is practised early, with the aid of the thermometer, many little innocents may be saved who now find an early grave.

I have also tried the same reduction treatment in a few cases of malarial fever this season in adults; in these it has acted in the same happy way.

There are scattering cases reported in the journals where it has been tried in rheumatism, scarlatina, etc., with high degrees of temperature, in all of which I propose to try it in future, particularly in scarlatina where the eruption does not appear upon the surface as it should, and the temperature of the patient ranges high.

A SECOND CASE OF RUPTURE OF THE INTESTINES, FOLLOWED BY PERITONITIS, AND DEATH IN THIRTY HOURS.

BY G. WINFIELD ZEIGLER, M.D.,

Resident Physician at the Episcopal Hospital.

MICHAEL O., æt. 65, married, laborer, was admitted into the surgical ward of the Episcopal Hospital about 10 o'clock on the morning of August 9, 1875, presenting the following history and symptoms.

The officer who brought him stated that the injury, which was caused by severe kicks upon the scrotum and lower part of the abdomen by a man with whom he was quarrelling, occurred two hours before admission.

When I first saw him, he was intoxicated, and unable to answer any questions. His thighs were flexed upon his abdomen, and with one hand he supported his scrotum.

He complained of very severe pain. After transferring him to a bed, I could not detect any external marks of violence excepting a contusion upon the lower part of his scrotum. His abdomen was tympanitic, and very painful upon pressure, more particularly upon the lower and right side. The

scrotum was very much swollen and extremely painful. His pulse was full and rapid; respirations hurried and labored; tongue coated, and skin clammy.

His bladder was empty, and an instrument could be passed without difficulty. He stated that his bowels had been moved a short time previous to the reception of the injury.

The treatment which was ordered consisted in the administration of twenty minims of laudanum, the application of cold to the head, and repeated warm mush-poultices to the abdomen, with an evaporating lotion of lead-water and laudanum to the scrotum.

The thighs were flexed by means of pillows placed under the knees. He was very thirsty, for which milk was ordered.

At 1 o'clock his condition had improved somewhat. The pain was less severe, and his mind clearer. He was now ordered three grains of Dover's powder, to be taken every four hours.

At 6 o'clock P.M. his condition was less favorable, as he began to vomit a thin, frothy matter. Lime-water was now added to the milk, which at first allayed the irritability of his stomach.

At 10.30 P.M. the vomiting had increased, and was tainted with bilious matter. He manifested symptoms of approaching delirium tremens, for which he was ordered twenty-five grains of potass. bromid., to be repeated if necessary. This, however, seemed to quiet him, and he slept for short periods.

At 7 o'clock A.M. next morning he was much worse; the vomiting having kept up more or less through the entire night. His abdomen was tense and highly tympanitic, and the swelling about the scrotum largely increased.

At 10 o'clock peritonitis was fairly developed.

At 1 o'clock his condition was growing much lower, when he was ordered five grains of ammon. carb., to be taken every two hours.

About one hour later, upon being called in haste to the patient, I found him dead when I reached the ward. Immediately prior to dissolution, he ejected large quantities of bilious, with some stercoraceous, matter.

The post-mortem was made twenty hours after death. Decomposition had already set in. No external marks of violence could be found except the contusion upon the scrotum observed during life. The scrotum was very much swollen.

The abdomen was very tympanitic and much distended. Upon section, diffuse peritonitis was found.

The cavity was filled with a yellow offensive fluid, mixed with fecal matter.

The intestines were in a high state of congestion, and in the lower third of the ileum there were discovered *two ruptures*, the larger one being about one inch, and the smaller one-fifth of an inch, in length.

The parts of the gut immediately surrounding, to the extent of several inches, were in a gangrenous condition. The other abdominal organs were in a normal state.

The lungs were apparently healthy, the right one being firmly bound down by old pleuritic adhesions.

The heart was enlarged, thin, and very flabby, with slight ossification and thickening of the semilunar valves.

The scrotal cavity was distended with gas; right testicle very much contused, and filled by bloody extravasation. The left testicle was also contused, but not so extensively injured as the right one.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY COLLEGE HOSPITAL, LONDON.

SERVICE OF MR. ERICHSEN.

Reported by JOHN B. ROBERTS, M.D.

EXCISION OF THE TONGUE FOR THE REMOVAL OF CARCINOMATOUS DISEASE.

THIS man, apparently about sixty years of age, comes to the hospital to be treated for cancer of the tongue. The malignant disease, involving the middle and posterior portions of the member, extends farther back on the right side than on the left; and on the former side there exists a deep ulcer, from which hemorrhage has occurred, so copious as to be only arrested by the application of perchloride of iron.

The great pain which the patient suffers, the presence of noxious discharges which come from the seat of disease, and the certainty of the recurrence of hemorrhage until the man sinks exhausted, are good reasons for the performance of excision of the tongue, which will not only render him far more comfortable, but will, in addition, add to the time which he can survive before the disease proves fatal. Furthermore, the submaxillary lymphatic glands show no signs of carcinomatous involvement, which is still another argument in favor of giving the patient the temporary benefit of this severe operation.

The operation shall be done by cutting through the lip and mylo-hyoid space, then sawing through the symphysis of the lower jaw, and removing the tongue from the hyoid bone by means of the galvanic *écraseur*.

The patient is now fully under the anæsthetic effect of the chloroform, and the incision is made in the median line of the lower lip, extending under the chin to the hyoid bone. It is necessary to secure some little arteries before proceeding; but now after they have been tied, and one of the teeth extracted, a narrow saw is applied to the lower jaw, and the bone carefully divided in the middle. The next step is to cleanse the mouth and fauces of blood by means of these pieces of sponge tied on the end of a stick. Then the assistants pull the tongue forwards with a pair of forceps, and hold the mouth widely open in order that the wire of the *écraseur* may be placed as far back as possible and thus encircle the whole mass of disease. The current from a nitric-acid battery of eight small cells is now passed along the platinum wire, which begins to sear its way through the tissues, and which is tightened from time to time until in a few minutes the tongue is entirely separated from its attachments. There is a little bleeding, however, which must be arrested, but this is speedily accomplished by taking a piece of ice in the forceps and holding it against the bleeding points.

By examination, it is found that the growth extended farther back on the right side than was expected, and that it has not been so completely excised as on the left.

No additional operation would be advisable, however, and the edges of the labial wound shall be brought together by ordinary hare-lip sutures.

In the course of a few days the teeth shall be wired in order to hold the sawn surfaces of the bone in apposition, and thus promote the occurrence of a ligamentous union between them, which will be sufficiently strong, since the patient will never masticate any hard substances. Osseous union might be obtained by drilling and wiring the jaw itself, but the operation would be a tedious one for the man to undergo, and would be unnecessary, since ligamentous union will answer all his requirements.

TRANSLATIONS.

PHOSPHORUS-NECROSIS.—Dr. A. Haas has recently written a memoir on this subject, from an abstract of which contained in *Le Mouvement Médical*, July 24, we take the following:

"Necrosis of the maxillary bones from phosphorus was first mentioned by Lorinser, of Vienna, in 1845. Its existence was soon denied; M. Dupasquier, among others, asserting that the symptoms described were due to arsenic. The growth of the match industry soon afforded numerous opportunities for investigation, and the existence of such an affection was soon placed beyond doubt. The method of its production, however, is still a matter of conjecture.

"A peculiar circumstance, and one which is difficult to explain, is that while the regular match-makers are attacked by the disease in all its malignity, yet the workmen employed in the manufacture of phosphorus itself, although their breath may become so saturated as to be luminous, and those occupied with the red or amorphous phosphorus, enjoy entire immunity from the effects of this poison.

"It has been asserted that the acids of phosphorus dissolved by the saliva penetrate the gums, and by contact with the periosteum and the bone afford an opportunity for the production of necrosis. This theory would account for the immunity of those classes of workers in phosphorus above mentioned, who are only exposed to the vapors of phosphuretted hydrogen, and not, as in the case of the match-makers, to the vapors of oxidized phosphorus. This theory of the local action of phosphorus was maintained by Strohl, while Lorinser and others maintained a general toxic effect brought about by exposure to the poison.

"Experiment has shown that the prolonged administration of phosphorus produces thickening of the periosteum, exaggerated formation of compact tissues, and diminution in the medullary spaces. The action of phosphorus on the exposed periosteum gives rise to periostitis.

"It is known that the bones themselves contain a high percentage of phosphorus. It is, therefore, easy to imagine that under the influence of a dyscrasia produced by the absorption of a toxic substance, the economy, losing in part its faculty for selection, assimilates an exaggerated proportion of bony material with which it is saturated. In this way the formation of osteophytes and that peculiar condensation of the bony substance so often observed can be explained, and as a result of this condensation occur obliteration of the nutritive canals and consequent necrosis.

"The theory of general toxic influence will not explain, however, the peculiar preference shown by the poison for the bones of the face. These bones are the first to ossify during foetal life, and are, besides, the best and most actively nourished of the whole body.

"The affection usually begins by periostitis, followed

by the formation of abscesses, and of fistulae at the bottom of which a black sequestrum is found. Sometimes the disease invades the maxilla alone; at other times it may progress step by step until all the bones of the face, and even those of the cranium, are invaded.

"It is generally agreed that surgical treatment is called for in removing the dead bone; at what period, however, the operation should be performed does not seem to be decided. M. Haas believes that since the special character of this necrosis is propagation, the operative procedure should be instituted at an early date. In support of his ideas, and in illustration of the disease in general, M. Haas gives the notes of a number of cases, and ends his memoir by the following conclusions:

"I. Necrosis of the maxillae occurs in workmen in match-factories. It is a necrosis of a specific nature, distinguished by its tendency to propagation.

"II. The expectant plan can and ought to be pursued at the beginning of the disease, because it sometimes terminates rapidly and spontaneously by elimination of the necrosed parts. Treatment is generally unavailing.

"III. When the necrosis shows no sign of self-limitation, when the patient is becoming weakened by the excessive and long-continued suppuration, the indication is for partial or entire resection of the maxilla. As a general rule, however, it is better to disarticulate the entire maxilla when any considerable portion is involved, in order to put an effectual stop to the progress of the disease. This operation is justifiable both on account of its slight gravity and the inconsiderable deformity consequent." X.

PALUSTRAL MELANÆMIA CONSIDERED AS A PROOF OF THE MIGRATION OF LEUCOCYTES THROUGH THE WALLS OF THE VESSELS.—Dr. Léon Colin, Professor at the Val-de-Grâce, read the following communication at a recent meeting of the Société de Biologie.

In palustral intoxication there are reckoned as the principal anatomical lesions: 1. On the one hand, a more or less considerable accumulation of pigment in the splenic pulp; 2, on the other hand, pigmentary deposits in different tissues, especially in those which are most closely in contact with the blood, in the vascular sheaths. These deposits are more common and more abundant along the course of the capillaries of small calibre, like those of the brain, in which the melanic granulations are submitted to prolonged stasis due to the obstacles which they themselves cause in the circulation. The pigment thus deposited in the vascular and perivascular tissues is as black as that which is found in the blood and in the spleen. Dr. Colin does not believe these deposits to be the result of transformation *in situ* of hematin, of the coloring-matter of the red globules. If these deposits did result from such a transformation, intermediate degrees of coloration would be observed in cases examined during the earlier stages of intoxication. Such, however, is not the case. The migration of the pigmentary granules enclosed in the circulatory current appears to take place through the vascular walls; but does this take place by a simple penetration of melanic granules without any vehicle? There exist, according to Colin, active intermediaries in this migration. These are the leucocytes, which, as is known, seize and retain foreign bodies with which they come in contact, and which, thanks to their amoeboid movements, may then penetrate the vascular walls and spread among the tissues. The leucocytes charged with pigment traverse, then, the vascular walls, and when after this passage they themselves disappear in the tissues in order to play their part in nutrition, they abandon the melanic matter with which they had been impregnated in the blood in the neighborhood of the

vascular walls. In a word, this affection proves much more than those experiments in which, by artificially inflaming the walls of the vessels, local migrations of leucocytes are obtained, migrations which are so abundant as to constitute perivascular purulent collections. It proves that the migration of the white globules is accomplished in the normal condition, without alteration of the vascular walls and above all the circulatory arborescence; and there is perceived a proof long looked for, that of the intimate communication of the solid elements of the blood with the various tissues.—*Gaz. Méd. de Paris*, No. 31, 1875. X.

APHASIA.—From an analysis of a recent thesis by A. Legroux, in the *Archives Générales* for July, we extract the following: Aphasia is characterized by the diminution or perversion of the normal faculty of expressing ideas by conventional signs or of comprehending these signs, in spite of the persistence of a certain degree of intelligence, and in spite of the integrity of the nervous and muscular sensory apparatus which serve for the expression or perception of these signs. Aphasia is of variable intensity; it may affect at the same time all the methods of language with a different degree for each of them; more frequently it attacks only one. Patients may be aphasic of speech, of writing, of reading, of gesture, or may be deprived of one of these faculties only. Aphasia is generally complete and sudden; it only exceptionally becomes progressively developed. This accident may have an acute or chronic course, may be permanent or transitory; there are aphasias which last only a few hours or a few days. Such are those of the hysterical, epileptic, or neuralgic. The most frequent cause of this accident is softening of the brain. The seat of the lesions resulting in aphasia is ordinarily in the anterior lobes of the brain, almost always in the left anterior lobe, and sometimes, probably, as a result of some functional anomaly, in the right anterior lobe; most usually the alteration affects the posterior portion of the third frontal convolution on the right side. In those instances of transitory aphasia without paralysis, it has been thought that a simple congestion might cause the perversion of language. X.

ACTION OF IRON ON NUTRITION.—Rabuteau (*Centralblatt f. Chirurgie*; from *Comptes-Rendus*, t. 80, p. 1169) has carried out a series of researches in his own person relative to the effect of iron upon tissue-change.

Each series of experiments extended over fifteen days, during which he took the same sort of nourishment, exercise, etc. During the first five days the daily excretion was exactly determined. From the sixth to the tenth day, then, two grains of chloride of iron were taken daily, the observations being continued, and during the last five days the estimation of iron excreted was included.

It appeared that the amount of urine was unchanged, its acidity was decidedly increased, during the administration of the iron. This fact is sufficient to justify the use of ferruginous preparations in cases of phosphatic urine, lithiasis and oxaluria, and to place in a correct light the favorable results observed from the iron treatment in such cases. The amount of solids and the urea in the urine were increased about ten per cent.; it thus appears that the administration of chloride of iron even in moderate doses increases tissue-change not inconsiderably. Rabuteau alludes to the rise of body temperature observed by Pourowski while taking iron, indicating increased oxidation, which is also indicated by the increase in urea. X.

COMPLETE LUXATION OF THE ASTRAGALUS (*La France Médicale*, August 7, 1875).—Dr. A. Rigal reports the case of a young man who fell in a ditch, the left foot receiving the weight of the body while extended

upon the leg. On the dorsum of the foot, in advance of the malleoli, there was a tumor which was easily recognized as the astragalus, whilst in the place normally occupied by that bone there was a depression very sensitive and painful to the touch. According to the author, the mechanism of this luxation was as follows. In consequence of the weight of the body coming suddenly upon the foot, there was an exaggeration of the normal arch of the latter under the influence of two forces which act normally in reverse directions upon the extremities of the toes and the heels. At the same time there was a twisting of the astragalo-scaphoid articulation, and depression of the articular surfaces, followed by propulsion of the astragalus from behind by the tibio-fibular "mortise" in the exaggerated movement of extension upon the leg. After the rupture of the ligament the astragalus was forced from its cavity like the stone of a cherry pressed between the fingers. In order to effect reduction, an assistant, taking the malleoli as a point of resistance, applied his thumbs vigorously to the head of the astragalus, and endeavored to thrust it downwards and backwards, while M. Rigal carried the foot upwards and outwards. At the second attempt the bone re-entered abruptly, and two months later the patient had entirely recovered.

In ninety-three reported cases of complete luxation of the astragalus, not compound, this was only the twenty-seventh time that reduction had been effected.

J. W. W.

THE POISONOUS PROPERTIES OF A SERIES OF ALCOHOLS (*La France Médicale*, August 4, 1875).—At a recent meeting of the Académie des Sciences, MM. Dujardin-Beaumetz and Audigé reported the results of a series of experiments on some of the alcohols produced by fermentation, including ethylic, propylic, butylic, and amylic alcohol:

1. The toxic properties of this series follow mathematically their atomic composition; whenever the latter is represented by high numbers, the poisonous action is marked, and this is the case whether the alcohol has been introduced through the skin or by the stomach.

2. For the same alcohol, the toxic effect is greater when it has been given by the stomach than when it has been administered through the skin. In the latter case, however, the dilution of the alcohol augments its action.

3. The poisonous phenomena observed appear to be the same in general, except the degree of intensity, whichever alcohol be employed.

The lesions produced also follow an increasing order from ethylic to amylic alcohol. The disturbances of the intestinal mucous membrane are all as intense when the alcohol has been given hypodermically as when it was given by the mouth. With the same alcohol, pulmonary congestion and apoplexy were more frequent when it had been given by the stomach.

J. W. W.

SULPHURIC ETHER IN THE TREATMENT OF STRANGULATED HERNIA (*Bull. Gén. de Thérap.*, July 30, 1875).

—Dr. F. Alessandri has observed six cases of strangulated hernia in which the use of ether was attended with excellent results. The patients were in great pain, nauseated, vomiting, and with complete obstruction of the bowels, the hernias being entirely irreducible. They were given a little ether by inhalation, an injection of a decoction of chamomile containing a few drops of ether was administered, and, at the same time, compresses soaked in ether were applied over the hernia. Following this treatment in each case there was an escape of gas from the bowels, and it was then found possible to reduce the hernia. From these experiences Dr. A. has been led to administer etherized injections in the meteorism of typhoid fever, and with very excellent results.

J. W. W.

ESCAPE OF PERITONEAL EXUDATION AT THE UMBILICUS (Baizeau: *Arch. Gén. de Méd.*, 1875).—Baizeau has observed two cases of recovery from purulent peritonitis in which there was spontaneous escape of pus at the navel, one of which is particularly remarkable owing to its long duration and the many serious complications by which it was attended. The patient was a boy aged 12 years, who was attacked with peritonitis in February, 1868, and in the course of his illness suffered also from pleuro-pneumonia, suppurative pleurisy, and parotitis also going on to suppuration. The pus in the abdomen found a way for itself to the navel, and the wound at this point was kept open by drainage-tubes, while the abdominal cavity itself was washed out twice daily with tincture of iodine largely diluted. The thorax was opened with a bistoury, and the pleuritic exudation treated in the same way as the abdominal. The drainage-tube was removed from the thorax on the 1st of October, from the navel on the 20th of December, and the boy finally made a complete recovery.

The second case was that of a girl aged 10 years, was uncomplicated, and received similar treatment, which was followed by cure at the end of three months. B. attributes great importance to the use of drainage and the injection of the dilute iodine. W. A.

THE INFLUENCES OF DIFFERENT MODES OF ANTISYPHILITIC TREATMENT ON PREGNANCY (F. Weber; *Allg. Med. Centralztg.*, 1875, Nos. 10 and 11).—These observations were made upon one hundred and twenty-nine pregnant women, among whom it should be noted that twenty suffered from gonorrhœa with slight complications. In twenty per cent. pregnancy did not continue until full term, the time at which it was interrupted being, in a large proportion of the cases, in the seventh or eighth month. Most of the children of these women died soon after delivery. The most favorable results were attained by the treatment by mercurial inunctions, for of the women thus treated, thirty-five in number, none aborted. Of twenty-three women who were treated by inunction and the iodide of potassium, or in whom, owing to debility, inunction was substituted by the iodide, twenty per cent. aborted. When the iodide of potassium and the bichloride of mercury were used there were fifteen per cent. of premature deliveries; and when the iodide alone, thirty-six per cent. After delivery the condition of the women who had been treated by inunction was more favorable than that of those on whom other modes of treatment had been carried out. W. A.

TREATMENT OF EPILEPSY AND OF CHILDREN'S CONVULSIONS (*Bull. Gén. de Thérap.*, July 30, 1875).—In a certain number of cases of epilepsy and eclampsia, the origin of the attack seems to be an instantaneous vascular contraction, propagated from the periphery towards the centre. Following this idea, Dr. Demme gives a hypodermic injection of from one to two milligrammes of atropia. In a case of obstinate convulsions occurring repeatedly in a child of six months, he obtained marked amelioration by injecting a solution containing five milligrammes of atropia to one hundred grammes of water. According to him, the effect produced depends on the paralyzing action which atropia exercises upon the terminal intracardiac branches of the pneumogastric and upon the peripheral vaso-motor nerves. J. W. W.

LUMBAR AND ABDOMINAL NEURALGIA PERSISTING AFTER THE CURE OF UTERINE LESIONS (*La France Médicale*, August 7, 1875).—M. Siredey calls attention to the persistence of the pains caused by uterine and peri-uterine inflammation after the disappearance of these diseased conditions. The painful localities are at

the points of emergence of nerves in the groin, upon the abdomen, in the lumbar region, etc. Instead of attempting to treat the uterus, which has often returned to its normal condition, we should consider such cases as induced by a nervous temperament, and should treat them by hypodermic injections of morphia, cinchona, pills of iron and quinine, and, if the patient is able to support them, by cold douches. J. W. W.

TREATMENT OF ACUTE PERITONITIS BY THE INJECTION OF WATER INTO THE PERITONEAL CAVITY (*Bull. Gén. de Thérap.*, July 30, 1875).—Basing his opinion upon some experiments made upon dogs by Nerlin, and also upon the practice of ovariologists, M. Netter thinks that injections of water might be of service not only in ordinary peritonitis, but also in the puerperal variety. He believes that aqueous injections into the abdominal cavity, employed from the onset, may cut short acute peritonitis, and that we would now be justified in making such injections at least in all cases of traumatic peritonitis when at the same time there exists a wound, made either accidentally or surgically, and permitting the introduction of a canula. J. W. W.

RUPTURE OF AN HYDATID CYST INTO THE VERTEBRAL CANAL; COMPRESSION OF THE SPINAL CORD (*Gaz. Heb.*, July 23; from *Bull. de la Soc. Anat. de Paris*, 1875, p. 93, t. lx.).—The patient, without previous symptoms, suddenly became paralyzed on rising from his bed one morning. The paralysis continued, bed-sores and urinary troubles supervened, followed by death. The autopsy showed an hydatid cyst, opening into the vertebral canal on a level with the ninth and tenth dorsal vertebræ, and which compressed the cord. The cyst was found to have originated in the right pleural walls, and to have penetrated the intervertebral disk. X.

ON THE ORIGIN OF VESICAL CALCULI (Franz Hofmann: *Archiv der Heilkunde*, 1874).—Calculi from the bladder of the ram are characterized by great softness, and when fresh were found to contain 86.84 per cent. of water, leaving only 13.11 per cent. of solid matters. After having been dried, they floated when thrown into water. After treatment with acetic acid a framework was left, which was found, upon examination, to consist of spermatozooids, so that in explanation of their origin it must be supposed that the seminal secretion found its way into the bladder, and became thickened by the precipitation of urinary salts upon it. W. A.

PAIN ABOUT THE KNEE IN COXALGIA.—A. E. Fick (*Wiener Med. Wochens.*, 1875, No. 10) endeavors to prove that many persons who have no anatomical knowledge, more especially children, have no idea of the existence of a joint at the hip, and refer all the action of locomotion to the knee. Since the power of localizing sensations in the interior of the body is but slight, the pains attending commencing coxalgia, which usually are not very severe, are not sufficient to call the attention of the patient to the real seat of the disease. The suffering, however, becomes more and more severe, and is finally connected with movement of the hip. W. A.

TREATMENT OF OZÆNA BY INJECTIONS OF CHLORAL (*Bull. Gén. de Thérap.*, July 30, 1875).—M. Créquy reports the cure of an obstinate case of ozæna by the injection of a solution of chloral. He simply made a siphon of an india-rubber tube by putting one end to the injection and the other well up into the nasal cavity. The disease had resisted injections of tannin, phenol, corrosive sublimate, etc., but was cured in a short time by this method. J. W. W.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

PUBLISHED EVERY SATURDAY BY

J. B. LIPPINCOTT & CO.,

715 and 717 Market St., Philadelphia, and 25 Bond St., New York.

SATURDAY, SEPTEMBER 11, 1875.

EDITORIAL.

GLASS.

OUR readers have no doubt heard of the discoveries which threaten to break the uniformity of processes and results that has reigned supreme in glass-manufacture since at least 1500 B.C., when was prepared that bead which a modern explorer unearthed in Thebes. The particulars of these discoveries are not so widely known, and merit mention here. The discoverer of "toughened glass," M. de la Bastie, is not a glass-manufacturer, but is a French gentleman, educated as an engineer, but placed by his private fortune beyond any need of practising his profession. For many years he has devoted himself to his self-imposed task, and finally, knowing that the toughness and tenacity of steel are greatly increased by dipping hot plates of it into heated oil, tried a similar method upon glass. Somewhat over two years ago he succeeded in producing glass which would bear hammering; but, with various articles of such character staring him in the face, he found that he had lost the key and was unable to duplicate his work.

It required two years of unwearying industry before complete success was at last obtained, but then an inexpensive glass was produced which bids fair to change the old proverb, "as brittle as glass," into "as tough as glass." The bath now used is a mixture of oils, tallow, wax, and resin, and similar substances, and the hotter the glass is when plunged into it the better is the result. A thin plate of this thoroughly toughened glass let fall on an iron

grating rebounded a foot without injury. The new material cannot be cut with a diamond, but yields readily to the emery-wheel. Consequently, whilst for window-panes it will probably be necessary to use only set sizes, unbreakable cut-glass utensils are readily prepared of any shape or size. Already this toughened glass has been introduced into the English market, and preparations are being rapidly perfected for manufacturing it on the largest scale. Curiously enough, whilst M. Bastie was perfecting his process, another civil engineer, Mr. Macintosh, of Westminster, was experimenting upon the hardening of glass. Like M. Bastie, he also drew his inspiration from the iron-workers, among whom he indeed has been prominent. Like Bastie, he practised the plunging of heated glass into baths, but by having the liquid at a very low temperature he succeeded in rendering glass, clear or colored, as hard as the hardest gems. He asserts that he has made fictitious gems even harder than real diamonds.

The results obtained by these two experimenters seem to show that glass, like steel, may be tempered at will, and suggest an almost limitless train of useful applications.

SPOONS IN MEDICINE.

THE following award of a coroner's jury in the city of Exeter, England, speaks for itself. The use of the minim-glass or of the drop is the proper way to administer powerful remedies. If the spoon be used, the physician should always ask to see the spoon which is to be employed:

"Congestion of the lungs, accelerated by an overdose of opium innocently administered by her mother from a modern teaspoon, containing two drachms, instead of from a teaspoon of older date, containing one drachm."

The victim was an infant.

SOME of the Western journals are occupied with the discussion of the action of the Evansville Medical Society, which expelled a member for announcing himself as a specialist through the daily press. There can be no doubt that the Society was right: its quondam member was certainly guilty of that which is said to be worse than a crime,—a blunder,—and should suffer accordingly. The correct interpretation of the code of ethics, according to the tolerated practices of some of the leading Eastern specialists, is to open a dispensary, under the ægis of some established institution if possible, otherwise in a hired room around the corner from the office, and advertise this special dispensary,

adding, in displayed type, Dr. —, aurist, or what may be, in charge, office such and such street, hours such and such. Then all goes merry as a marriage-bell; the dear public learn where their special ills may be cured, practice flows in, professional etiquette is maintained, and universal harmony prevails.

URINALS.—Whether, by locating proper urinals, our city authorities will ever do away with the hideous sign-boards "Commit no Nuisance here," as well as with the stained walls of alley-ways and the streamlets which trickle often most inopportunistically in the evening across the pavements, we do not know. We live, however, in hope, and consequently note with interest that in London only such urinals are found to remain decent as are built of slate, with a wide, well-inclined gutter, and a free stream of water constantly running.

THE lowest point in the race towards complete degradation appears to have been reached by the Keokuk Medical College. According to the *Clinic*, its catalogue is illustrated with a "hideous dissecting-room scene." The pictures displaying perineal dissection are said to be "disgusting in the extreme." *O tempora! O mores!*

OUR readers will remember our notice of the case of Dr. Wood, who was put on trial in England for manslaughter, on account of the death of a woman under his care from rupture of the uterus during labor. We are happy to say that, by direction of the judge, he has been acquitted.

THE London *Lancet* warns against the deleterious effects of travel in the underground railways of the metropolis, on account of the excessive impurity of the confined air of the tunnels.

THE Philadelphia colleges have already commenced their autumnal courses, and the indications of large classes this winter are very good.

LEADING ARTICLES.

THE INFLUENCE OF THE LOWER ORGANISMS IN THE PRODUCTION OF INFECTIOUS AND CONTAGIOUS DISEASES.

III.

IN addition to the diseases which are connected with the putrefactive process or with local inflammations, bacteria have been found in all fevers, the contagious characters of which have been by some attributed to these organisms.

So far back as 1850, Panum expressed the idea that the development of a certain kind of fungus stood in a specific relation to cholera. More recently Coze and Feltz have maintained fevers to be, in fact, internal fermentations, depending upon organisms in the blood. Hallier regards them as internal parasitic diseases, and attempts to describe the various forms of fungi observed in each. Buhl, Waldeyer, and Wagner describe a disease under the name of *intestinal mycosis*, which they suppose to be intimately connected with malignant pustule, and which proves most rapidly fatal with choleraic symptoms.

As regards the bacteritic origin of malignant pustule itself, reference has already been made to this point. Bollinger thinks, with the authors just mentioned, that the so-called intestinal mycosis is only a form of malignant pustule. Christot and Kiener found bacteria in the blood of a man who died of glanders, and also in the blood of various inoculated animals. Although Obermeier does not attempt to decide whether the moving filaments he describes as occurring in recurrent fever are specific or even at all pathological, the discovery of their constant presence in this disease must be most interesting as bearing upon the present question of animated pathology. The various substances found by Salisbury in the excreta of different diseases seem unlike anything met with by other observers.

Bacteria, as we see them, are described as occurring in a large number of diseases of the most varied nature, differing not only very widely in their clinical history, but which have also for many centuries held places in very separate categories. How far may each of these diseases, so radically distinct in their natures, be attributed to a specific organism peculiar to itself? Hallier endeavored to answer this question by describing a distinct form of fungus for each fever; his ideas, however, have long since been abandoned. Few other attempts have been made to draw any distinctions between the forms of fungi found in different diseases.

Letzerich has recently described a form of fungus which he finds in the mucus, and even air-vesicles, in whooping-cough. This he considers the specific cause of the disease, and believes himself able to produce true whooping-cough in the rabbit by means of the fungi removed from patients suffering with this disease and cultivated in a solution of sugar! He also describes differences between the diphtheritic fungi and those found in whooping-cough, in their mode of development, appearance, and action: the fungus of the latter disease does not penetrate the tissues or tend to produce putrefaction, both of which characters are found in the diphtheria bacteria. Klein has described some very peculiar organisms in the tissues around the lesion of typhoid fever, which seem unlike the micrococci usually met with and may be peculiar to that disease. Billroth says, and we believe this opinion is now shared by most adherents of the bacterial theory of disease, that though different modes of culture may produce various forms, according to the nutrient matter used, none differ in any essential point from those found in

putrid substances outside the body. From this fact, and from the similarity which exists between the forms described in various diseases, he concludes that, up to the present, no morphological distinction is known by which one can decide that a given bacterium belongs to any definite disease.*

Besides the investigations into the bacterial origin of malignant pustule, glanders, recurrent and typhoid fevers, and whooping-cough, above mentioned, researches into the following affections have of late been undertaken from the same standpoint. Heiberg, Virchow, Eberth, Rud. Maier, Burkhart, Heiler, have all contributed studies or single cases of the so-called endocarditis bacterica, mycosis endocardii, or diphtheritic endocarditis. Researches upon the bacterial origin of erysipelas have been published by Anfrecht, Orth, Hirschberg, Hiller, and Lukomsky, the latter attracting very considerable attention. In regard to cholera, Lewis's and Cunningham's researches have been very careful and are worthy of study. Eberle, Nedswetzky, and Andreas Högyes have also published researches in the same direction. Variola as connected with the lower organisms has received attention from Lugenbühl, Zuelzer, and Weigert. Even acute yellow atrophy of the liver has been regarded by Klebs and Lander as connected with bacteria.

Recently a discussion took place in the London Pathological Society upon the germ-theory of disease, in which the whole subject was brought up for review. Dr. Charlton Bastian, a well-known advocate of the theory of spontaneous generation, opened the question in an able address combating the hypothesis of a bacterial origin of disease. The propositions maintained by him may be briefly summed up as follows:

1. With two exceptions, no definite germs or organisms are to be met with in the blood of patients suffering from these diseases in any stage of their progress.
2. The virus or contagium of some of these diseases, whatever it may be, does not exhibit the properties of living matter.
3. On the other hand, the virus of most of these contagious diseases with which definite experiment has been made is most potent in the fresh state, whilst its power very distinctly diminishes in intensity as organisms reveal their presence more abundantly therein,—facts which seem to point to the conclusion, or at least are quite consistent with the notion, that the contagious poison may be a chemical compound which gradually becomes destroyed or modified by the successive changes taking place in association with processes of putrefaction.
4. There is the extreme improbability of the supposition that this whole class of diseases should be caused by organisms known only by their effects.
5. The facts of the sudden cessation, periodical visitation, and many other phenomena of epidemics, however difficult they may be to explain upon any

hypothesis, seem to oppose almost insuperable obstacles to the belief that living organisms are the causes of such epidemics of specific contagious diseases.

Dr. Bastian's views were ably attacked by Dr. Burdon Sanderson, who pointed out the impossibility of reconciling the appearance and disappearance of the spirilla germs in the exacerbations and intervals of relapsing fever with any theory of contagion save the germ-theory. He also alluded to the course of sheep-pox, where two processes went on simultaneously, the development of pustules and the development of organisms. The debate was carried on by various other investigators, of less celebrity, but showed a tendency to theorizing without an adequate amount of facts, and, upon the whole, the discussion has not added very much to our knowledge of the subject.

Birch-Hirschfeld, in a general survey of the present state of our knowledge of the bacterial origin of disease, speaks as follows:

"We must confess that in a majority of diseases the fungous origin of which has been made the subject of inquiry, we possess little or no exact proof of a parasitic cause, not even in the case of malignant pustule or that of relapsing fever. But the *probability* that bacteria are not insignificant associates of these pathological processes is, to an unprejudiced observer of the facts recently discovered, very strong, and the same may be said of the diseases previously mentioned.

"The chief difficulty in the discrimination of the objects alluded to lies in their extremely small size, in the unsatisfactory condition of our knowledge regarding their development and the circumstances of their existence.

"The morphological similarity of the various species of bacteria found in connection with different diseases is certainly, as has been said before, no evidence against their pathological significance, but it undoubtedly is a great hindrance to their convincing demonstration.

"There can be no question, however, on the other hand, that much which we already know regarding various circumstances connected with the life and development of bacteria agrees singularly well with the ideas impressed upon our minds when we endeavor to form a conception of the infectious material of epidemic disease. We find ourselves under these circumstances almost inevitably forced to think and speak of the *germs* of infection, not the *gases* of infection, and so on. The usually unnoticed penetration within the body, the period of incubation (which we can scarcely explain otherwise than by the theory that the germs must first develop themselves in the body to a certain extent before they unfold their injurious action), the spread and increase of contagion from sick bodies,—all these facts point to such an explanation.

"Let it be considered, further, that only a portion and not all of the population are attacked in an epidemic of any given disease, although the infectious material undoubtedly reaches all or nearly all. This obliges us to admit that the observed facts are most easily ex-

* We are indebted for this review of progress, as well as for various other materials used in this article, to a "Report on Pathological Anatomy," by Dr. Gerald Yeo, Irish Hospital Gazette, October 1, 1874.

plained if the infectious material is conceded to be of a vegetable organic nature, the germs of which do not flourish under all circumstances, but only where they find an appropriate soil.

"It must be conceded, however, that so far as most of the forms of bacteria are concerned, investigation shows that if they are not received in too overwhelming quantity the healthy organism offers them an almost absolute resistance. Proof can be adduced in support of this; besides, there are certain bacteria which are injurious only when their invasion occurs in an already disturbed locality. Proof also is available in the case of many diseases for the assertion that those only are attacked by the disease who were sick already."

In concluding this article, which, from the circumstances of the case, is brief and imperfect, and which, from the mass of material to be examined, must necessarily often appear to a certain degree undigested, we must refer the reader desirous of further knowledge of the matter to the articles quoted, and also to a lecture by Moritz Kaposi, published in the *Vierteljahresschrift für Dermatologie und Syphilis*, 1874, p. 55. This article is accompanied by a plate giving admirable representations of the principal varieties of disease-organisms. Dr. Stimson's article, which is perhaps more accessible, is also accompanied by a very good plate.

REVIEWS AND BOOK NOTICES.

ON THE ADMINISTRATION AND VALUE OF PHOSPHORUS. By E. A. KIRBY, M.D., M.R.C.S., Esq. Philadelphia, Lindsay & Blakiston, 1875.

This pamphlet of over fifty pages is very readable, contains much asseveration and explanation as to the value of phosphorus in various conditions of nervous exhaustion, but puts forth very little that is at once new and valuable. Its *raison-d'être* appears to be the peculiar preparation which its author invented, and which is prepared at the laboratory of H. & T. Kirby & Co.,—this pilula phosphori mollis seemingly affording the only perfect method of exhibiting the drug that ever has been or will be produced by human ingenuity. The subject of the administration of phosphorus is certainly very important, and the desire at the same time of doing good and advancing the fortunes of self or family is no doubt a laudable one, but in therapeutic writing the result is not apt to be especially unbiassed and trustworthy. Therefore we advise our readers to season their reading of the brochure with at least a grain of salt. If the pills really contain the metalloid unoxidized in a diluent favoring solution, they must be good; we suppose they are good. Whether they are better than all other forms of administration is more doubtful; probably they resemble closely the preparation of Prof. Percy, of New York, in which the drug is dissolved in cacao butter and coated with gelatin. After reading the pamphlet, we confess, it still seems to us wisest to eschew all pills of phosphorus, although they have the great advantage of tastelessness, because they are liable to vary in the amount of the remedy contained in them, and to undergo oxidation and deterioration by age. The oleum phosphoratum of the Prussian Pharmacopœia, which has been much used, is undoubtedly very nauseous; but if to a saturated solution of phosphorus in chloroform an equal amount of spirit of camphor be added, and the

whole made into an emulsion with gum, a little sugar, and mint-water, the resultant liquid is usually taken without complaint.

THE MOVEMENTS AND INNERVATION OF THE IRIS. By DR. H. GRADLE. Chicago. Pamphlet, pp. 56.

This brochure is a reprint from the *Chicago Journal of Nervous and Mental Disease*. It is a brief *résumé* of the results obtained by numerous experimenters on the physiology of the iris, and offers a very fair view of our present knowledge of the much vexed subject of which it treats. It is too brief to be satisfactory to the general reader; but the very numerous references to authorities make it valuable as a bibliography of the subject. The author has thrown no new light upon points still held in dispute. S. D. R.

SELECTIONS.

CHOLAGOGUES.—In Dr. Rutherford's and M. Vignal's experiments a modification of Röhrig's method was adopted. Dogs which had fasted for eighteen hours were curarized, and artificial respiration maintained. A canula was tied in the common bile-duct; the cystic duct was clamped. The bile flowed from the canula into a finely graduated cubic centimeter measure, and the quantity secreted was recorded every fifteen minutes. It was shown that this method of continuous observation yielded results far more reliable and instructive than that adopted by Röhrig.

Two experiments on the secretion of bile in dogs that had fasted for eighteen hours, and which received nothing more than the doses of curara used in all the experiments for the purpose of keeping the animals at rest, showed that the biliary secretion was not affected by the doses of curara given; that the biliary secretion, on the whole, somewhat diminishes in the course of an experiment lasting from six to eight hours, but that the chemical composition of the bile remains almost exactly the same. The curara was always injected into a vein; the various substances hereafter mentioned were injected directly into the duodenum; for this purpose the wound in the abdominal wall was opened, and the substances injected through the wall of the viscus.

Three experiments with croton oil showed that although it produced violent irritation in the alimentary mucous membrane in all cases, it increased the biliary secretion in only one instance. A high place is, therefore, not assigned to this substance as a stimulant of the liver.

Six experiments with podophyllin proved that this substance greatly increases biliary secretion. A definite statement regarding the composition of the bile before and after podophyllin will be given in the report. Röhrig's statement that aloes deserve a high place as a hepatic stimulant was confirmed by three experiments, in which the extract of Socotrine aloes was employed. The analysis of the bile (not hitherto given), however, showed that after aloes the bile is more watery; nevertheless, the velocity of secretion is so much increased that it certainly causes the liver to excrete more biliary matter.

Three experiments with rhubarb proved that it is a far more important hepatic stimulant than Röhrig has stated it to be. Doses of rhubarb were given nine times in the course of the experiments, and they never failed to excite the liver within half an hour after they were given. Analysis of the bile before and after rhubarb in all the three experiments proved the remarkable fact that, notwithstanding the greatly increased velocity of secretion after rhubarb, the bile-solids secreted by the hepatic cells are not diminished. The rhubarb appar-

ently calls forth an increased secretion of normal bile. Three experiments with senna proved that its power as a cholagogue is far below that of rhubarb. The bile is rendered more watery. Four experiments with the aqueous extract of colchicum proved that it is a very decided cholagogue. The bile was rendered more watery, but the increase in the velocity of secretion was such that the amount of biliary matter excreted by the liver was certainly increased.

Two experiments with the solid extract of taraxacum proved it to be a cholagogue, though not a powerful one. Two experiments with scammony proved that it has a slight cholagogue action. Of four experiments with calomel, the secretion of bile was slightly increased in one, but there was nothing but diminution of the secretion in the other three. Purgative action was produced in all. The bile was rendered more watery.

Two experiments with gamboge gave no evidence that this substance is a cholagogue. One experiment with castor oil confirmed Röhrig's statement that this substance has scarcely any cholagogue power. Two experiments with dilute alcohol injected into the stomach showed that after the alcohol was given, the secretion of bile slightly diminished.

In the report, a full account will be given of the post-mortem examination of the state of the alimentary canal (hitherto entirely omitted in such experiments), so that the effect upon the biliary secretion and that upon the intestinal mucous membrane can be compared.

It was shown that the increased biliary flow from podophyllin, rhubarb, etc., in these experiments could not be ascribed to reflex contraction of the gall-bladder, for this had been previously wellnigh emptied by digital compression, and the cystic duct had been clamped. Nor could it be ascribed to reflex spasm of the larger bile-ducts, for the exaggeration of the biliary flow was far too great and far too prolonged to be explained in this way. Reasons were adduced for regarding it as probable that the agents are absorbed, and act on the liver directly. It was not professed, however, that their *mode of action* was definitely settled, the experiments having had for their primary object a determination of the facts of the case.

The opinion was expressed that powerful purgative action tends to diminish the biliary secretion.

When a hepatic and intestinal stimulant, such as podophyllin, is administered to an animal that is not fasting, it is probable that—1, the liver is excited to secrete more bile; 2, the absorption of bile and food from the small intestine is diminished on account of the purgative effect.

In conclusion, it was pointed out that this research proposed to be simply a contribution to comparative physiological pharmacology; and that it was left to the clinical investigator to compare these results with those observed in human pathological conditions.—*British Medical Journal*.

INJECTION OF QUININE INTO THE TRACHEA IN INTERMITTENT FEVER.—Some years ago, Dr. Jousset, of Bellesme, travelling in the northern part of the Greek Archipelago, was called in the morning to see a Greek child, aged twelve, who was seriously ill. On arriving, he was informed that the child was delicate, and liable to febrile attacks, but had been in her ordinary health the day before, when she had been playing with other children. In the evening she had suddenly become pale and shivery, and the parents thought her dead; but after two hours or less she had partially recovered and fallen into a deep sleep. In the course of the night she had two more fainting-fits. When Dr. Jousset saw her, she was lying on a thin mattress on the floor, extremely pale, with deep-sunken eyes,—in a word, like

death. The respiration was scarcely perceptible; the pulse from 38 to 42, very feeble. Slight indications of intelligence still remained. On auscultation, coarse râles were heard. The belly was soft, the liver normal, the spleen very large. M. Jousset diagnosed it as a case of malarial fever of bad type; and he immediately endeavored to give the patient some quinine, but vomiting was induced, and syncope. Having previously had a successful case, he at once proceeded to inject a solution of hydrochlorate of quinine into the trachea. He inserted the trocar of a Pravaz' syringe into the middle of the trachea, between the first and second cartilaginous rings. A little difficulty was experienced, as the thyroid gland was large, and he only satisfied himself that the point was free by blowing through the canula. The pulse was now 31. No effort at coughing was made, and he thought she had succumbed. Five minutes after, the pulse was 40. The limbs were now covered with warm flannel, and light friction made. In ten minutes the pulse had risen to 45, and an involuntary evacuation occurred. She murmured some words. In thirty-five minutes she asked for some drink. She complained of intense pain in the head, which, however, was not hot. In an hour the pulse had risen to 96; and shortly afterwards she was in her ordinary health.—*London Lancet*.

POISONING BY OPIUM OF A SUCKLING BABE THROUGH ITS MOTHER.—The *Boston Medical and Surgical Journal* says, "In our foreign exchanges we learn of a case of poisoning of an infant by opium administered to the mother. The latter was about to undergo an operation, and at ten o'clock in the morning she took twenty-five drops of Battley's sedative solution, and repeated the dose at two o'clock. At eight o'clock in the evening she took five centigrammes of opium in a pill.

"Her child, a strong boy seven weeks old, was restless throughout the day. At midnight he took the breast, and suddenly fell into a deep sleep, in which he remained for six hours. On awaking he sucked a little, and again slept throughout the day. At two P.M. respiration diminished in frequency, and became less deep and jerking. At six P.M. the pupil was contracted, respiration imperfect, jerking irregular, but in frequency nearly normal. It was with great difficulty that he could be aroused. Coffee was administered by the mouth and by the rectum, and the patient was exposed to the draught from an open window, and in about an hour he seemed better. An hour later, respiration ceased for a while, and he appeared dead; life, however, returned, and the following day, by two A.M., he was out of danger."

ALCOHOLIC SOLUTION OF BROMINE IN UTERINE CANCER.—Henneberg (*Centralblatt für die Med. Wis.*) reports six more cases in which the alcoholic solution of bromine (1.5) was proved to be of undoubted value, both in the after-treatment of the wounded surfaces after the enucleation of the cancer and in its direct application in the form of parenchymatous injections and tampons. Henneberg has further tested the action of bromine on cancerous neoplasms in various extirpated tumors. Portions of the tumor which were placed in the solution and left to remain in it for forty-eight hours, on being removed showed only fibres of connective tissue with isolated (*Spiegel*) mirror-cells. In the case of a freshly extirpated cervical cancer, the cancerous masses were found destroyed throughout.—*Med.-Chir. Centralblatt*, No. 18, 1875; *New York Medical Journal*.

REMOVAL OF BREAST BY ELASTIC LIGATURE.—M. Fériér presented to the Société de Chirurgie a cystosarcoma of the breast which he had removed from a female eighty-four years of age, who was in a very

enfeebled condition. The tumor, existing for twenty-four years, was of the size of the fist, movable, and separated by its weight from the adjacent parts. The operation consisted in passing a band of rubber through the base of the tumor, and afterwards tightening it by clamps. The tumor during the first days assume a reddish color, then became blue, and finally fell off. The patient, a few months later, succumbed to an attack of erysipelas of the face. The author believes that the elastic ligature in removal of tumors is preferable in old people to every other method, and that in employing it we avoid the loss of blood which is inevitable in the cutting operation; cicatrization is more rapid than after the use of the galvano-cautery; lastly, anæsthesia is dispensed with.—*Revue de Thérap. Méd.-Chir.*; *New York Medical Journal*.

ERYSIPELAS FROM APPLICATION OF ARNICA.—A further case of inflammation of the skin following the application of tincture of arnica is reported in the *Wiener Med. Wochenschrift*. An elderly clergyman, who had been in the habit of applying the tincture for every external injury, having sustained a severe bruise of the left knee, applied the diluted tincture; soon afterwards the skin became hard, red, and swollen, and in five hours this swelling had extended over the entire left lower extremity up to the hip, and was accompanied by much heat and itching; it subsided in about fifteen hours without desquamation. The author, Dr. Koller, states that as the tincture of arnica is used by the peasantry in all injuries, he has very often observed this inflammation of the skin, which closely resembles the erythema after bites from insects, after the use of even the diluted tincture.—*New York Medical Journal*.

TREATMENT OF NEURALGIA IN THE MAMMARY GLAND.—In these cases Prof. Broca has returned to the treatment which was employed by Récamier. Whether the tumor is appreciable or not, as soon as there is pain or sensitiveness he has recourse to methodical compression. Récamier superposed a series of disks of amadou, applied closely, and held in place by a very tight bandage, and this bandage was only renewed at long intervals.—*Revue de Thérap. Méd.-Chir.*; *New York Medical Journal*.

GLEANINGS FROM OUR EXCHANGES.

OVARIOTOMY.—In a paper read before the Suffolk District Medical Society, Dr. James R. Chadwick describes the removal of a unilocular ovarian cyst. The abdominal walls were found to be very thick; an incision four inches long was made in the median line, a Wells clamp was applied to the pedicle, and the wound closed with silk sutures. Two gallons of fluid were in the cyst. The total weight of the tumor was eighteen pounds.

The recovery from ether was speedy and unattended by vomiting. Morphine to the extent of a grain was required to relieve the pain apparently due to the traction on the pedicle. Three hours after the operation the patient was dozing, so that he ventured to leave her in charge of the nurse for half an hour. On his return, however, he found her in a state of profound collapse, almost pulseless, scarcely breathing, blue, and clammy. Brandy and heat had already proved ineffectual to arouse the vital forces. He immediately removed the dressings from the wound, and, finding the abdomen considerably distended, took out nearly all the sutures, broke up the agglutinations, and allowed much serum to escape: on search, no effusion of blood was discovered in the peritoneal cavity. The patient revived at

once. The pedicle seemed so tense that, before reclosing the incision, he tied it firmly below the clamp, removed this, and dropped the pedicle in Douglas's pouch. A similar sudden revival from imminent death was observed in 1867 by Koeberlé, who, during an acute peritonitis subsequent to ovariectomy, made an incision into the right flank, where dullness was detected, and allowed a large accumulation of pinkish serum to escape. The patient rallied at once and made a good recovery. Dr. Chadwick's case did well for the following three days, but on the fourth day the intestines became greatly distended with gas, interfering so much with respiration that it became necessary to puncture them. This gave great relief, but she sank and died on the fifth day. After her death it was discovered that her habits had been very intemperate, although she had, previous to the operation, positively denied that this was the case. Dr. Chadwick unhesitatingly attributes the fatal result to exhaustion depending upon the condition induced by the immoderate use of alcoholic stimulants.

In connection with the puncturing of the intestines with the aspirator to relieve the flatulence, it seems as if another indication may be met by injecting brandy, beef-tea, etc., through the canula into the small or large intestine, after the gas has escaped. By this means a patient's strength might be sustained when nothing could be retained in the stomach and absorption by the rectum was too slow to meet the demands of the system. In this way fluids could be introduced in considerable quantities into that part of the alimentary canal from which they would be most readily absorbed. If the use of the trocar is as harmless as is asserted by those who have tried it, there is no reason why the intestines should not be repeatedly tapped for the injection of nutrient and stimulant fluids in many desperate conditions and diseases, when the other resources of medical art have failed. In such a case as this, there would have been no other means of introducing enough alcohol to carry her through the depressing effect of such an operation, had her habits been made known during life. Might not peristaltic action also have been excited by the same measure, and thus a second advantage been derived from this procedure? In cases of fecal impaction, may not the hard, scybalous masses be softened and broken up by the injection of different fluids into their midst, when enemata and purges have proved powerless?

AUTUMNAL CATARRH (*Boston Medical and Surgical Journal*, August 19, 1875).—Dr. Morrill Wyman alludes to the approach of the season when autumnal catarrh, or "hay-fever," as it is popularly called, although there is no evidence that it has anything to do with hay as a cause, sets in and runs its course. He advises those who are able to change their residence to leave, if possible, before the annual return of the disease, and to seek elevated localities. To those who cannot get away he gives the following directions. Avoid the direct rays of the sun, the dust of the street, and the smoke of railway-trains; avoid also such plants as Roman wormwood, golden rod, and others, which are known to bring on an attack. The sleeping-room should have an open fireplace, should not be exposed to the afternoon sun, and, after being well aired for an hour in the early morning, should have the doors and windows closed and kept closed until the following morning. The diet should be nourishing, containing animal food. Alcoholic stimulants should be avoided. Flannels should be worn from the middle of August and increased in warmth as the season and disease advance.

Of medicine, quinine has been of the most use as a preventive and a relief to the most annoying symptoms. Its use should be commenced a week or ten days before

the usual return of the disease, and continued through its course, in doses of one to two grains with each meal. Gentle saline or other laxatives are useful, but violent purging should be avoided. For itching of the eyes, mouth, and throat, a saturated watery solution of quinine, made without the addition of any acid, may be used locally with an atomizer.

The irritation and discharge from the nostrils may be relieved by the "head-bath," holding the head for five minutes over a bowl of very hot milk-and-water or water alone, the head and shoulders meanwhile covered with a shawl. In railway-travelling and on dusty roads much relief is gained by placing small pieces of wet sponge just within the nostrils, or covering the whole face with Swiss muslin wet with water. The nostrils are often completely obstructed early in the morning, and swallowing impeded: this may be relieved temporarily by active movements of the limbs for a few minutes,—leaping or running quickly up-stairs,—after which one can often eat his breakfast with comparative comfort.

For the night, a closed room, and, if opium can be taken without inconvenience, six or eight grains of Dover's powder or an equivalent in laudanum or a solution of morphine, often give more or less freedom from that most annoying symptom in the later stages, the spasmodic cough. It may also be relieved by the spray from the watery solution of quinine as just mentioned. The common household mucilaginous remedies, gum arabic and flaxseed tea, for temporary relief are not to be rejected. The asthma, like that occurring at other seasons and produced by other causes, is often spasmodic, nervous, and wayward; it is relieved by a variety of remedies: the inhaling of the smoke from burning stramonium leaves and saltpetre, three parts of the former to one of the latter, probably gives as much relief to a majority of sufferers as any other treatment.

BILATERAL SECTION OF THE CERVIX UTERI (*The Clinic*, August 7, 1875).—Dr. J. C. McMechan refers to the employment of the operation of bilateral section in cases of uterine flexion, in constrictions of the cervical canal or the external or internal os, in sterility, in hyperplasia or severe neuralgia of the cervix. He describes his method of operating as follows: "The left arm must be drawn behind the patient so as to let her rest on the left side of the chest, and the right leg be so flexed as to let the right knee lie just above the left. This is the position recommended by Sims. The patient can now be chloroformed or not, as desired; but this is often not necessary, as the operation is not painful, and lasts but a few minutes. The speculum is now introduced and held by an assistant whilst the operator inserts the tenaculum into the substance of the cervix, and by gentle traction draws the cervix down to the pudenda; one blade of the scissors is to be inserted into the canal cervicis and the other passed up to the insertion of the vaginal arch, and the incision is then to be made. The other side is to be treated in the same manner. If it be necessary to relieve a constriction at the internal os, it may be done by means of a narrow, blunt-pointed knife; but, according to Barnes, this is but seldom necessary. If much hemorrhage takes place, the cut surface is to be plugged with lint saturated with a solution of persulphate of iron." In the *Wiener Medizinische Wochenschrift* for 1869, Prof. Gustav Braun reports sixty-seven cases of bilateral incision. Fifty-three of his cases resulted favorably."

CHRONIC ENLARGEMENT OF THE TONSILS IN RELATION TO DEAFNESS AND CERTAIN SPASMODIC PHENOMENA (*The Western Lancet*, July, 1875).—Dr. F. W. Godon reports a number of cases of enlarged tonsils in all of which there were frequent attacks of subacute inflammation, accompanied by dysphagia, dryness of

the throat, and hoarseness of voice. In all the adult cases there existed a variable amount of inflammation or congestion. Deafness was in each case a prominent and an alarming symptom, and some of the patients were markedly affected by it, while some presented unusual spasmodic phenomena.

The result of excision of the tonsil was uniformly favorable.

The majority of cases of this kind are regarded as asthma, or as cases of deafness resulting from cold or nervous shock, but little stress being laid upon former throat-troubles. Many cases of so-called deafness from cold depend on a chronic hypertrophy of the tonsils, producing great thickening of and resulting in closure of the pharyngeal orifice of the Eustachian tube, by pressing the palate against it. The affection cannot be recognized by a mere glance at the throat, for sometimes the entire circumference cannot be seen by inspection alone, and in such cases the finger should be made use of in the examination and the gland will be found to be enlarged above and below. Usually the patient complains of sore throat at the time of consultation, and gives in addition a history of successive attacks of sore throat; but, inasmuch as the affection may be chronic from the start, no history of throat-trouble may be given at all. The treatment should be, in all cases of this kind, excision of the tonsils, with proper local applications, when all the painful symptoms will quickly and permanently subside.

FOREST CULTURE AS A PROPHYLACTIC TO MIASMATIC DISEASES (*Pacific Medical and Surgical Journal*, August, 1875).—Dr. W. P. Gibbons, in an able paper on the above subject, comes to the following conclusions. That forest trees in sufficient numbers will absorb, from deep as well as from superficial strata, a sufficient quantity of water to establish regular subterranean currents, and that whatever miasm may be combined with or held in solution by the water will thus be carried off, or have its toxic properties in whole or in part neutralized; that the water thus exhaled will be diffused through the atmosphere in such quantity as to be returned in great part to the surface-soil by precipitation; that the high summer temperature may thus be so modified as to reduce the nocturnal heat below 60°; that the causes thus operating to prevent vegetable fermentation, or to dissipate miasm if developed, would protect the valley from regular visitations of paludal fevers; that the modification of climate thus induced would, under ordinary circumstances, insure average crops of grain in localities which are now dependent either on unusually wet seasons or on artificial irrigation; and that, while immediate benefits would thus be conferred upon the farmer by extensive tree-planting, the remuneration would be cumulative, not only in the regularly increasing value of his timber, but in the prospective reclamation, by natural process, without absolute expense, of land which is now utterly useless.

THE HYPODERMIC USE OF APOMORPHIA AS AN EMETIC IN CHILDREN (*Medical Record*, August 7, 1875).—Dr. William F. Duncan, after considerable experience with apomorphia, says that the qualities which recommend it particularly are the rapidity of its action, the absence of danger from an over-dose, the lightness of its secondary effects, the shortness of the period of nausea, the easy manner of its introduction.

The average time at which emesis has occurred, after the introduction of this drug under the skin, is 2.9 minutes, which is very much less than the shortest time noticed when using the yellow sulphate of mercury.

The longest time for emesis to appear was 4.15 minutes, in a case of alcoholism, while the shortest was 1.75 minutes, in a case of capillary bronchitis.

The dose of apomorphia, hypodermically used, for an

adult, ranges from gr. $\frac{1}{10}$ to gr. $\frac{1}{20}$, but in children it is quite large in proportion.

For a child of 18 months	gr. $\frac{1}{10}$.
" " 2 years	gr. $\frac{1}{10}$.
" " 3 "	gr. $\frac{1}{15}$.
" " 5 "	gr. $\frac{1}{20}$.
" " 8 "	gr. $\frac{1}{25}$.

Glycerin seems to preserve the strength of the drug, and alcohol will dissolve it more readily than water: so that it should be prepared after the following formula:

R Apomorphiæ, gr. vii;
Spt. rectificat., ℥xx;
Glycerin., ℥x;
Aquæ, ℥l.—M.

PROPERTIES OF GRINDELIA ROBUSTA (*Pacific Medical and Surgical Journal*, August, 1875).—Dr. Henry M. Fiske has employed the *grindelia robusta*, an herbaceous perennial plant, a native of the west coast of America, in a variety of cases with excellent results. It is a demulcent as well as stimulant, and makes an excellent dressing for vesicated surfaces. In burns, the fresh herb bruised and applied frequently over the injured parts is an unequalled anæsthetic. It is an excellent remedy in uterine catarrh, or in catarrh of the genito-urinary tract. In subduing the intense burning and itching of vaginitis, as well as painful priapism, it is of great value. In the first, the tincture or fluid extract, of the strength of one tablespoonful of either to about four tablespoonfuls of water, should be used as an injection three or four times a day, and cloths should be soaked in it and applied to the pubes as hot as can be borne. In the other, a direct application should be made of the bruised plant, in the form of a poultice, if possible, changed frequently. In a few hours marked beneficial results will be noticed. In iritis, no matter what the cause, whether gout, rheumatism, scrofula, or violence, it seems to be almost a specific. Dr. Fisk gives two cases of iritis in which he employed *grindelia* with excellent effect.

THE EMPLOYMENT OF CHLORAL AS AN ANÆSTHETIC IN NATURAL LABOR (*The Obstetrical Journal*, August, 1875).—Dr. H. Chouppé concludes from a number of observations that chloral is a powerful anæsthetic, capable, when it is given in a sufficient dose, of suppressing completely the pains provoked by the uterine contractions. The suppression of the pain, so advantageous in numberless instances, is not obtained at the expense of the regularity and rapidity of labor. The uterine contractions lose nothing, either in frequency or in force, by its administration. If in any case they seem to recur less often than before the administration of the drug, what they lose in frequency they gain in force. In suppressing the pain and the excitation which it provokes, chloral generally hastens the termination of labor, and may be employed without any inconvenience to the mother or the infant. It is especially among excitable women, who have wasted their powers in the first part of labor, and among hysterical patients, that chloral is indicated. Whatever it may be, when it is decided to employ chloral it is necessary to give it in a sufficient dose to produce useful effects, and not to lose by too much circumspection the advantages of a valuable remedy.

POISONING BY PICKLES (*Boston Medical and Surgical Journal*, August 19, 1875).—Dr. H. Lossing reports a case of a family who, after eating pickles, were affected with symptoms of irritant poisoning which were only allayed by active and continued treatment. The "vinegar" in which the pickles were contained was found to be a dilution of impure sulphuric acid, in which were also iron, arsenic, and oxalic acid. Large quantities of this stuff are sold all over the country.

MISCELLANY.

THE LOCALIZATION OF SENSORY CENTRES IN THE BRAIN.—At a recent meeting of the British Medical Association, Dr. Brunton read a paper communicated by Dr. Ferrier, containing an "Abstract of Experiments on the Brains of Monkeys, with special reference to the Localization of Sensory Centres in the Convolutions." The experiments, which were conducted by trephining and the destruction of the sensory centres by means of a red-hot wire, led to the following results. These centres are bilateral, so that when one of the centres of touch was destroyed, there was loss of tactile sensibility in the corresponding half of the body. Stimulation of the centre of hearing caused the animal to prick up its ears as if it heard something, while destruction of the whole of this centre rendered the creature totally deaf. Destruction of the centre of vision corresponding to one eye (e. g., the right) only rendered the animal temporarily blind in that eye, the function, after twenty-four hours, being carried on by the opposite centre. In the discussion that followed, Dr. Nairne pointed out that other observers had arrived at conclusions different from those of Dr. Ferrier, and that the brain of the monkey could not be taken as exactly similar to that of a man; but Dr. Brunton thought the mistake made by German and other investigators who differed from Dr. Ferrier was, that they took the brains of animals lower even than the monkey to correspond with that of man. M. Dupuy had arrived at different results. He said that he had found that when the centres of motion on one side of the brain were removed, paralysis followed for a short time throughout the corresponding part of the body, but that when the centres were removed from both sides of the brain there was no paralysis at all.

PARIS AND LONDON IN 1874.—The *Bulletin récapitulatif de Statistique municipale*, relating to Paris for 1874, has just been issued by the Préfet de la Seine. It corresponds with the Registrar-General's Annual Summary for London, and although its statistics are published in a far more elaborate form than those for London, they afford the means for a comparison between the vital statistics of the two largest cities of the world. The population of London in 1874 was very nearly double that of Paris; the density of population in persons to an acre was, however, only 44 per acre in London, whereas it was 96 in Paris. The marriage-rate was 8 per 1000 in London, and 10 in Paris; the birth-rate 35 in London, and 29 in Paris; and the death-rate 21.6 in London, and 22 in Paris. Whereas the marriage-rate in Paris exceeded that in London by 25 per cent., the birth-rate in Paris was 20 per cent. below that in London. The death-rate in the two cities in 1874 showed little difference, and yet, in consequence of the variation between the birth-rates, the natural increase in the population during the year, by excess of births over deaths, was equal to nearly 14 per 1000 in London, whereas it was not more than 7 per 1000 in Paris. Notwithstanding that the marriage-rate in Paris considerably exceeds

that in London, the proportion of illegitimate births in Paris was nearly 27 per cent., while in London it is only about 4 per cent. With regard to the mortality statistics, the annual Paris Bulletin contains information in far greater detail than the London Annual Summary. The rate of mortality is given for each of the twenty arrondissements and for each of the eighty quarters into which Paris is divided. In the twenty arrondissements the death-rate in 1874 ranged from 15 per 1000 to 27. It is somewhat remarkable that in the arrondissement in which the density of population is greatest in Paris—namely, more than 300 persons per acre—the death-rate did not in 1874 exceed 16 per 1000. London figures show a very different result.—*London Lancet*.

CULTIVATION OF NUTMEGS IN JAMAICA.—According to Mr. R. Thompson, Colonial Botanist, Jamaica (*Journal of Applied Science*), the cultivation of the nutmeg-tree is very successfully carried on on that island. A number of plants have been supplied, and about two thousand are now under propagation at the Bath Gardens, and will shortly be ready for distribution. A fine nutmeg-tree growing in the vicinity has a crop of about four thousand unusually large fruits. At present prices, this quantity—calculating ninety nuts to the pound—will realize about twenty-two dollars. However, this crop appears to be considerably above the average, as five dollars is the usual value of the annual produce of one tree. The nutmeg begins to bear about the seventh year, and the price of the fruit depends largely on the size, or number to the pound. Large nutmegs count about eighty to the pound.—*Canada Pharm. Journal*.

A HEAVY DOSE OF MERCURY.—"A few days ago," says the Gilroy (Cal.) *Advocate*, "Mrs. Anna Babb's little boy drank a pound of quicksilver. The child is less than three years old, and even in California is considered rather young to indulge in so strong a beverage. He found the mercury-bottle in some rubbish in an old trunk, while playing, and drank the whole, leaving but a few drops. The physician was sent for, who administered some light remedy. The child gave no other indication of having taken the mercury than drowsiness. The metal did not all leave the stomach for ten days, but he was about all the time, and is now as bright as ever."

A TRAINING-SCHOOL FOR NURSES.—The plan of management of the training-school recently established at Montreal, as given by the *Canada Medical Journal*, is as follows: Each nurse binds herself to serve three years, the first six months free, and after that to receive ten dollars per month and two suits of uniform annually, and comfortable board and lodgings at the "Home" when unemployed. The expenses have been met by private subscription, and the concern is now nearly self-supporting. It contains about forty beds.

LOCAL ANÆSTHESIA IN CASES OF LABOR.—Dr. Friedlander relates that, being called to a woman who was suffering intolerable pain in the sacral region, he re-

sorted to an application of chloroform (one part) and ether (two parts), after having vainly tried several other means. He obtained by this means total cessation of all pain until perfect delivery. After having successfully tried the same application in a great many cases, he recommends its employment as an anodyne for the pains of parturition.—*Deutsche Klinik; Lancet*.

EXTRA FEES.—With a view to encourage patients and others who may be in need of the attendance of a physician to send him word at such time as will admit of his arranging his work for the day, the Forfarshire (Scot.) Medical Association have confirmed the resolution unanimously adopted at last year's meeting, "that all visits sent for at 10 A.M., and requiring to be attended to the same day, should be charged at an extra rate."—*Ex*.

AN OLD SAYING.—A contemporary says that "leucocythæmic histomorphoses antitype septicæmic prodromata." This is what every physician has repeated daily to his friends and family; indeed, physicians never converse socially with each other without using as a preface this admirable and appropriate salutation.—*American Weekly*.

Dr. J. W. BECHTEL, of Harrisburg, was convicted, August 31, of attempted malpractice on Amanda Earnest, of Hummelstown. Her betrayer, Henry G. Walmer, was found guilty as an accessory.

THE SEXTON'S POEM.—

"It was a cough
That took him off;
It was a coffin
They took him off in."

The session of the London medical schools commences October 18.

NOTES AND QUERIES.

COMMUNICATIONS have been received from "Peter Aarundel" and "Knowledge-Seeker." These authorities are hereby respectfully informed of the long-existing rule that communications, in order to be published, must be accompanied by the name of the writer, even if the latter is to remain unknown to the general public.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 31, 1875, TO SEPTEMBER 6, 1875, INCLUSIVE.

WEBSTER, WARREN, SURGEON.—Granted leave of absence for one month. S. O. 174, A. G. O., August 30, 1875.

MIDDLETON, J. V. D., ASSISTANT-SURGEON.—Leave of absence further extended one month. S. O. 49, Headquarters of the Army, August 30, 1875.

HUNTINGTON, D. L., ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon Price, to comply with par. 5, S. O. 158, c. s., A. G. O. S. O. 93, Department of California, August 25, 1875.

O'REILLY, R. M., ASSISTANT-SURGEON.—Relieved from temporary duty at Fort Hamilton, New York Harbor, and to rejoin his station, Fort Hamilton, New York Harbor. S. O. 175, Military Division of the Atlantic, September 3, 1875.

AINSWORTH, F. C., ASSISTANT-SURGEON.—Assigned to duty at Fort Vancouver, Washington Territory. S. O. 115, Department of the Columbia, August 19, 1875.

PRICE, C. E., ASSISTANT-SURGEON.—Assigned to duty at Angel Island, California. S. O. 93, c. s., Department of California.